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1850.	R.A. h m s	Decl. ° ′ ″	Log Δ.
Dec. 27	0 13 6·85	+5 34 12·0	0·29952
28	14 26·86	38 25·4	·30269
29	15 47·49	42 45·8	·30585
30	17 8·72	47 13·2	·30898
31	18 30·54	51 47·3	·31209
32	0 19 52·95	+5 56 28·0	0·31519

EGERIA.

Hamburg. (M. Rümker.)

1850.	Green. M.T. h m s	R.A. ° ′ ″	Decl. ° ′ ″	
Nov. 15	7 18 10·7	27 9 38·5	+8 24 1·7	Eq.
	10 10 5·9	7 52·5	21·7	Mer.
16	7 0 29·4	26 56 8·7	26 28·3	Eq.
20	9 24 39·0	26 3 31·6	37 48·4	—
25	9 22 8·2	25 8 2·7	54 11·4	—
26	6 59 15·4	24 59 12·0	57 18·4	—
	9 18 14·2	58 16·9	8 57 48·8	Mer.
28	6 12 22·6	24 40 53·2	9 4 30·4	Eq.
29	8 56 44·0	24 31 12·2	8 49·5	—
30	6 46 4·5	24 23 42·3	+9 12 43·1	—

"*Apparent* places of comparison stars derived from observations with the meridian circle."

1850.	App. R.A. h m s	App. Decl. ° ′ ″
Nov. 16	1 46 57·03	+8 27 23·2
	1 52 52·08	8 29 12·0
26	1 46 31·14	8 47 42·0
	1 46 17·54	8 51 50·5
29	1 42 25·55	+9 4 5·7

Elements. By Mr. George Rümker.

	(1.) From obs., Naples, Nov. 2; Hamburg, 20th; Altona, 13th. ° ′ ″		(2.) Naples, Nov. 2; Hamburg, Nov. 29, Dec. 26. ° ′ ″	
M……	288 37 17·1	Nov. 2·0 …………	298 41 31·87	Jan. 0, 1851
π ……	116 26 49·4	………………………	119 40 8·02	
☊ …	43 35 24·4	………………………	43 20 19·06	
i ……	15 57 59·8	………………………	16 26 49·33	
φ ……	5 31 9·4	………………………	5 4 11·00	
e ……	0·0961805	………………………	0·08836579	
μ ……	866″·2216	……………… log μ	2·9350437	
Log *a*	0·4082517	………………………	0·4099753	

For Greenwich Mean Time and to Mean Equinox, 1851·0.

Nov. 29, Calcul.—Observ. = +0″·10 in Long. +0″·02 in Lat. by 2d Elements.

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LIVERPOOL. Equatoreal. (Mr. Hartnup.)

1850.	Greenwich M.T.	R.A.	Log $\frac{p}{P}$	N.P.D.	Log $\frac{q}{P}$	Star of Comp.
	h m s	h m s	s	° ′ ″	s	
Nov. 27	7 57 44·5	1 39 16·35	−8·179	80 58 46·8	−9·8467	B.A.C. 488
	8 17 40·9	15·82	−8·072	44·0	9·8449	— —
	8 37 37·6	15·29	−7·924	40·5	9·8437	— —
28	10 30 43·5	1 38 36·11	+8·084	80 54 38·0	9·8445	— —
	10 50 40·0	35·75	+8·189	35·4	9·8464	— —
	11 10 36·7	35·13	+8·270	32·6	9·8484	— —
29	8 26 35·2	1 38 4·82	−7·941	80 51 5·7	9·8429	— —
	8 46 31·8	4·39	−7·721	2·9	9·8419	— —
Dec. 5	8 9 39·5	1 35 15·31	−7·857	80 25 51·6	9·8390	— —
	8 47 3·2	14·64	−6·723	44·1	9·8381	— —
6	7 25 57·9	1 34 53·95	−8·140	80 21 24·4	9·8413	— —
	7 45 54·7	53·62	−8·019	17·2	9·8396	— —
9	6 33 22·0	1 33 59·66	−8·306	80 7 7·9	9·8441	— —
	6 48 19·5	59·52	−8·252	1·7	9·8422	— —
11	10 50 19·2	1 33 29·19	+8·381	79 56 5·0	9·8468	— —
	11 5 16·8	29·27	+8·417	0·7	9·8495	— —
13	11 20 2·6	1 33 9·18	+8·464	79 45 18·4	9·8528	— —
	11 35 0·3	9·08	+8·490	13·6	9·8559	— —
19	7 34 41·2	1 32 52·82	−7·503	79 12 4·5	9·8284	— —
	7 52 38·4	52·79	Mer.	11 57·2	9·8282	— —
21	9 24 37·4	1 33 1·15	+8·234	78 59 27·3	9·8332	— —
	9 39 35·2	1·02	+8·290	23·8	−9·8354	— —

"The observations are corrected for refraction. The corrections to be applied for parallax in time and arc are represented by *p* and *q*. P is the equatoreal horizontal parallax."

"The following is the assumed *mean* place of the star of comparison for 1850·0, derived from the Greenwich 12-year catalogue."

	R.A.	N.P.D.
	h m s	° ′ ″
B.A.C. 488	1 29 9·16	78 37 38·80

The errors of Rümker's Ephemeris by the Liverpool observations are as follow.

	Computed—Observed. R.A.	Computed—Observed. N.P.D.
	s	″
1850. Dec. 19	+11·11	−62·7
21	+12·77	−72·4

CAMBRIDGE. On the Meridian. (Professor Challis.)

1850.	Greenwich M.T.	R.A.	N.P.D.	Log $\frac{q}{P}$
	h m s	h m s	° ′ ″	
Nov. 23	9 31 33·8	1 41 55·35	81 12 33·9	−9·8348
25	22 18·1	40 31·26		
28	8 37·7		80 54 40·7	−9·8324
29	9 4 7·5	38 3·89	80 50 46·7	−9·8319
Dec. 7	8 29 10·9	1 34 34·00		

"Obtained with difficulty, the planet being very faint."

B

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Northumberland Equatoreal.

1850.	Green. M.T. h m s	R.A. h m s	Log $\frac{p}{P}$	N.P.D. ° ′ ″	Log $\frac{q}{P}$	No of Comps.	Star.
Nov. 21	11 57 6·1	1 43 21·00	+8·366	81 18 38·7	−9·8457	10	(*a*)
25	10 36 54·1	40 29·11	+8·122	81 5 31·9	−9·8371	4	(*b*)
Dec. 5	10 50 34·5	1 35 12·09	+8·358	80 25 9·2	−9·8392	8	(*c*)

Assumed *Apparent* Places of the Stars.

	R.A. h m s	N.P.D. ° ′ ″	Authority.
(*a*)	1 41 19·77	81 28 9·6	B. (Weisse) i. 743
(*b*)	41 23·09	81 3 32·1	Cambridge Observation.
(*c*)	1 34 43·38	80 30 28·0	— —

"The star (*c*) is Bessel i. 633. The assumed place of each of the stars (*b*) and (*c*) depends on one transit and one circle observation."

Ephemeris. By M. G. Rümker.

For Greenwich Mean Noon.

1850.	App. R.A. h m s	App. Decl. ° ′ ″	Log. Dist. from Earth.
Dec. 8	1 34 25·15	+9 47 11·9	0·23615
9	34 8·45	9 52 7·5	
10	33 53·63	10 57 9·6	
11	33 40·68	2 18·3	
12	33 29·59	7 33·2	0·24578
13	33 20·34	12 54·6	
14	33 12·93	18 22·3	
15	33 7·35	23 56·2	
16	33 3·59	29 36·2	0·25570
17	33 1·62	35 22·3	
18	33 1·45	41 14·3	
19	33 3·05	47 12·2	
20	33 6·41	53 16·0	0·26584
21	33 11·51	10 59 25·6	
22	33 18·34	11 5 40·9	
23	33 26·89	12 1·8	
24	33 37·14	18 28·3	0·27612
25	33 49·09	25 0·3	
26	34 2·72	31 37·6	
27	34 18·02	38 20·3	
28	34 34·97	45 8·4	0·28646
29	34 53·55	52 1·7	
30	35 13·75	11 59 0·1	
31	35 35·55	12 6 3·6	
1851. Jan. 1	35 58·93	13 12·1	0·29681
2	36 23·88	20 25·6	
3	36 50·38	27 43·9	